

## 1527 Silicone Sealant For PV Modules

### TECHNICAL DATA SHEET

Silicone Sealant P.N. SIJ0011X

#### PRODUCTION DESCRIPTION

super resistance to ultra violet(UV), rain, contamination and hail. For sealing the side frames of solar cell, sealing/adhesive the junction boxes of solar cell and for sealing the solar energy lamps.

#### TYPICAL APPLICATIONS

- Sealing the frames of solar cell.
- Sealing/adhesive the junction boxes of solar cell .
- Sealing the solar energy lamps.

#### UNCURED PROPERTIES

Base Resin.....	Poly(dimethyl)siloxane
Color.....	White
Extrusion (s/20g @ 25°C).....	15(Rigid package) 10(Soft package)
Cure Speed(Fixture/Full).....	6min./24 hrs. (2mm)
Specific Gravity (g/cm <sup>3</sup> ) .....	1.38
Flashpoint (°C) .....	>93

**Cured Specifications: Cure speed will vary with temperature, relative humidity, depth of material and presence of moisture.**

#### CURED PROPERTIES

Operating Temperature Range(°C).....	-54 to 210
Hardness (Shore A) (ISO7619, GB/T531) .....	48
Elongation at break (%) (ISO37, GB/528).....	300
Tensile Strength (MPa) (ISO37, GB/T29595).....	2.3
100% Tensile strength(MPa) (ISO37, GB/T29595).....	1.0
Adhesion Strength(MPa) (ISO4587, GB/T29595).....	1.8
Tensile with J-box(N) (GB/T29595) .....	1000
Qualitative bond failure mode(TPT)(GB/T29595) .....	C100
Volume resistivity(Ω.cm) (IEC60093, GB/T29595) .....	1.0×10 <sup>15</sup>
Breakdown tension (kv/mm) (IEC 60243-1, GB/T29595) .....	20

**Damp-Heat aging properties(Damp-Heat aging at 85°C, 85%RH for 1000h)**

Elongation at break (%) (ISO37, GB/528).....	320
Tensile Strength (MPa) (ISO37, GB/T29595).....	1.6

100% Tensile strength(MPa) (ISO37, GB/T29595).....	0.8
Adhesion Strength(MPa) (ISO4587, GB/T29595).....	1.5
Tensile with J-box(N) (GB/T29595) .....	800
Qualitative bond failure mode(TPT)(GB/T29595) .....	C100
Volume resistivity(Ω.cm) (IEC60093, GB/T29595) .....	1.0×10 <sup>15</sup>
Breakdown tension (kv/mm) (IEC 60243-1, GB/T29595) .....	20

#### APPLICATION METHOD

- For best result, clean and dry all surface to be sealed.
- Apply a continuous and even bead of silicone to one surface.
- Assemble parts. Remove excess with knife.

#### STORAGE AND SHELF LIFE

Store at room temperature in a cool and dry place. Keep away from children. This product has a usable life of 12 months from the date of production.

#### CAUTION

- Allow adequate ventilation when using.
- Avoid prolonged skin contact.
- In case of eye contact, flush with water and seek medical attention.
- This product is not recommended for use in pure oxygen and/or oxygen rich systems and should not be selected as a sealant for chlorine or other strong oxidizing materials.
- Keep away from children.

**For complete safety and handling information, please refer to the appropriate Material Safety Data Sheets prior to using this product.**

## 1527 Silicone Sealant For PV Modules

TECHNICAL DATA SHEET

material surfaces and different curing mechanism. Storage conditions, shipping vehicles and etc. can affect product stability, mechanical and physical performances. We cannot assume responsibility for the results obtained by others over whose methods we have no control. We strongly suggest that the users do a test based on the data before formal use of this product.

## 1527 Silicone Sealant For PV Modules

### MATERIAL SAFETY DATA SHEET

#### II. COMPONENTS

Ingredients	%	Threshold Limit Value
Vinyl oximosilane	3-5	None
Methyl ethyl ketoxime	***	None

\*\*\*When this product is exposed to moisture, 1-5% methyl ethyl ketoxime may be formed.

#### III. IDENTIFICATION

**Toxicity:** Mild eye and skin irritant.

**Primary Routes of Entry:** Eye, skin contact.

**Signs and Symptoms of Exposure:** May cause dermatitis on prolonged contact insensitive individuals.

**Potential Routes of Entry:** Skin, eyes, inhalation.

**Symptoms of Overexposure:** Possible skin and eye irritation on contact. Inhalation of vapors in an unventilated area may, over time, induce headaches.

#### IV. FIRST AID MEASURES

**Eye Irritation:** Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

**Skin Contact:** In case of skin contact, wash thoroughly with soap and water. Do not use organic solvents for cleanup as they may dry or irritate the skin and act as a carrier for chemical absorption.

**Inhalation:** Remove affected person to fresh air.

**Ingestion: Conditions to Avoid:** Do not induce vomiting. Keep individual calm. Obtain medical attention.

#### V. FIRE FIGHTING MEASURES

**Flash Point:** > 93°C

**Recommended Extinguishing Agents:** Use CO<sub>2</sub>, foam or dry chemical.

**Products Formed by Fire or Thermal decomposition:** Formaldehyde, silica fume.

**Unusual Fire or Explosion :** None

## 1527 Silicone Sealant For PV Modules

### MATERIAL SAFETY DATA SHEET

#### VI. ACCIDENTAL RELEASE MEASURES

**Environmental precautions:** Prevent product from entering drains or open waters.

**Clean-up methods:** Scrape up as much material as possible. Maintain good ventilation for large spills. Place scrap material in a well ventilated area and allow to cure to rubber.

#### VII. HANDLING AND STORAGE

**Safe Storage:** Store at room temperature in a cool and dry place. Keep away from children.

**Handling:** Avoid prolonged skin contact. Keep away from eyes.

#### VIII. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Engineering Controls:** Local ventilation is recommended.

**Respiratory:** Use respiratory equipment.

**Skin:** Avoid skin contact. Washing at mealtime and end of shift is adequate.

**Hand:** Chemical protective gloves should be worn where repeated or prolonged contact can occur.

**Eyes:** Use chemical safety goggles.

#### IX. PHYSICAL AND CHEMICAL PROPERTIES

**Vapor Pressure:** 5 mm Hg at 21°C

**Vapor Density:** N.A.

**Solubility in Water:** Polymerized

**Specific Gravity:** 1.37

**Boiling Point:** N.A.

**Appearance:** White paste

**Odor:** Mild

#### X. STABILITY AND REACTIVITY

**Stability:** Stable

**Hazardous Polymerization:** Will not occur

**Incompatibility:** Strong oxidizers. Polymerizes on contact with water.

#### XI. TOXICOLOGICAL INFORMATION

Ingredients	Literature Referenced Target Organ and Other Health Effects	Carcinogen IARC
Vinyl oximinasilane	No Data	NO
Methyl ethyl ketoxime	Allergen, Irritant	NO

#### XII. ECOLOGICAL INFORMATION

**Ecological information** Not available

#### XIII. DISPOSAL CONSIDERATIONS

Dispose of as a chemical waste in accordance with current local, state, and federal regulations.